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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758.649	01/16/2004	Takeshi Takashima	118367	6352
25944	7590	06/26/2006	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			GUHARAY, KARABI	
			ART UNIT	PAPER NUMBER
			2879	

DATE MAILED: 06/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/758,649

Applicant(s)

TAKASHIMA ET AL.

Examiner

Karabi Guharay

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Amendment, filed on 5 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-15 and 22-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-15 and 22 is/are allowed.
- 6) ☒ Claim(s) 23-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Response to Amendment

Amendment, filed on 13 March 2006 and further supplemental amendment, filed on 5 April 2006 has been considered and entered.

Verified English translation of priority documents have been acknowledged.

Claims 1-10 & 16-21 are cancelled.

New claims 22-29 are added. Consequently, claims 11-15 & 22-29 are currently pending.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 23-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyashita et al. (US 2001/0001050), and further in view of Hosokawa et al. (US 2003/0077480).

Regarding claims 23 & 24, Miyashita discloses a method of manufacturing an organic EL device (see Figs 1-3) comprising: forming a first electrode (101-103, 201-203, 301-303) over a substrate (104, 204, 304) forming a bank (105,205,305) over the substrate (paragraph 102), the bank surrounding at least a part of the first electrode, forming a luminescent layer (106-108, 206, 207,210) over the first electrode, wherein 108, 210 are the blue color luminescent layer, luminescent layer being surrounded by the bank, further forming a second electrode (113, 211) over the luminescent layer and

Art Unit: 2879

the bank, and part of the second electrode is formed on the bank (see Figs 1-3).

Miyashita further discloses the layers are formed by ink-jet method.

However, Miyashita does not explicitly teach applying a liquid material including an element selected from among a halide or an oxide of an alkali metal, an alkali earth metal and a rare earth metal on the luminescent layer.

However, in the same field of making organic EL device, Hosokawa teaches forming a region of electro transporting including a halide or an oxide of an alkali metal, an alkali earth metal and a rare earth metal between the luminescent layer and cathode (paragraph 68). Further teaches applying such layers of reducing agents improves the luminance of the emitted light and life of OLED (paragraph 69).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to apply a layer of such materials as taught by Hosokawa, by ink-jet method between luminescent layer and the cathode of Miyashita's device, since this will improve the brightness and life of OLED.

Regarding claims 25, Hosokawa et al. disclose that the liquid material being a dispersion liquid, the element being LiF particulate which is dispersed in a polar disperse medium to form the dispersion liquid (paragraph 70 in view of paragraph 74). The same reason for combining art as in claim 24 applies.

Regarding claim 26, Hosokawa et al. disclose that the liquid material being an aqueous solution, the element including one atom of Na, K, Rb, Cs, the element being solute in a polar solvent to form the aqueous solution (paragraph 74 in view of paragraph 69). The same reason for combining art as in claim 24 applies.

Regarding claim 27, Miyashita discloses a hole transporting layer (208) between the first electrode (203) and the blue color luminescent layer before forming the luminescent layer (210, paragraph 102-106).

Regarding claim 28, Miyashita et al. disclose that the second electrode (cathode) is formed by a sputtering method (paragraph 60).

Regarding claim 29, Miyashita discloses an organic EL device (Fig 4).

Allowable Subject Matter

Claims 11-15 & 22 are allowed over the prior art of record.

Reasons for allowance of claims 11-15 are presented in previous office action.

Regarding claim 22, the prior art of record neither shows nor suggests a method of manufacturing an organic EL device comprising all the limitations of claims 22, particularly comprising the limitations of forming a first ETL layer over the first luminescent layer in a liquid phase process where first ETL element is selected from a halide or an oxide of an alkali metal, alkali earth metal and a rare earth metal, and forming a second ETL over the second luminescent layer in a liquid phase process, where the second ETL includes the organic metallic complex.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 2879

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karabi Guharay whose telephone number is 571-272-2452. The examiner can normally be reached on Monday-Friday 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on 571-272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

K. Guharay
Karabi Guharay
Primary Examiner
Art Unit 2879